Unobstructed Flow

WMX-SERIES
Flanged Magmeter

ISO 9001:2008
CERTIFIED COMPANY

FEATURES
• NSF/ANSI 61 Available (4” - 12”)
• Built-in pulse output for data logging or telemetry
• Minimal straight pipe required
• Continuous battery or external power
• IP68 submersible (option)

APPLICATIONS
• Filtration systems
• Pump stations
• Municipal water/wastewater
• Industrial water/wastewater
• Cooling tower water treatment
• Packaged plants

Seametrics’ series of standard and IP68 (submersible) flanged magmeters. Available in sizes from 3” up to 12”.

WMX104
WMX101-168
WMX104-300
GENERAL INFORMATION

The WMX-Series are flanged electromagnetic flowmeters for use in 3” to 12” pipe in municipal or industrial water and wastewater applications where propeller meters have typically been used in the past. Because the WMX has no moving parts and has electrodes designed to discourage fouling, this magmeter performs well and requires much less frequent maintenance in applications where debris would impede propeller meters. There is no rotor to stop turning or bearings to wear out. Minimal straight pipe requirements allow WMX-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

In chemical injection applications, the chemical injection point must be placed downstream of the magmeter OR far enough upstream for complete mixing to occur before the fluid reaches the meter.

The submersible units, -168 option, are rated IP68 (NEMA 6P) for applications where the meter may be under water up to a depth of 3 meters for prolonged periods of time.

Rate and total indication are standard on both models. Units are customer-selected and factory-set. No set-up is required. The WMX101 is externally powered with 8-32 Vdc at 30 mA max (see NOTE in Specifications). Two Lithium 3.6V “AA” batteries provide auxiliary power during power failures, allowing the meter to continue recording flow rate and total without interruption for the duration of the outage. Where external power loss is infrequent, battery life exceeds 10 years.

The 20-foot power cable also provides pulse output for use with a variety of Seametrics and other displays and controls for remote reading, data logging, pulse-to-analog conversion, and telemetry applications. High frequency pulse rate (required for use with 4-20 mA converters) is standard; additional pulse rates are optional.

The WMX104 is a battery-operated unit for use when pulse output is not required. Two Lithium 3.6V “D” batteries provide power and are replaceable with an approximate 1-year life under continuous use. An optional input/output cable can be installed post-factory if needed for changing applications.

FEATURES

- Welded steel epoxy-coated flow tube
- 316SS electrodes
- Santoprene/Polypropylene liner
- Flanges, ANSI 150 lb. drilling
- Equalization lug
- Powder-coated diecast-aluminum electronics housing
- Internal Data Logger (Optional)
- Power/Output cable port access, tamper-sealed
  (NOTE: WMX101 comes with standard 20’ cable installed)
- Tamper-evident security seal & cross-drilled screws (2) for tamper-evidence

Rate and total indicator
WMX-SERIES
Flanged Magmeter

FEATURES Continued

Rate and total indicator

Tamper-evident security seal &
cross-drilled screws (2) for tamper-evidence

Power/Output cable port access, tamper-sealed
*(NOTE: WMX101 comes with standard 20’ cable installed)*

Internal Data Logger (Optional)

Powder-coated ductile cast iron body & electronics housing

Glass filled molded plastic liner

316SS electrodes

Flanges, ANSI 150 lb. drilling

WMX104-300
*(IP68 housing standard for 3” model)*

Rate and total indicator

Tamper-evident security seal &
cross-drilled screws (2) for tamper-evidence

Power/Output cable port access, tamper-sealed
*(NOTE: WMX101 comes with standard 20’ cable installed)*

Internal Data Logger (Optional)

Powder-coated ductile cast iron electronics housing

IP68 Housing Option
*(For 4”-12” meter; standard for 3” models)*
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Pipe Sizes</th>
<th>3&quot;, 4&quot;, 6&quot;, 8&quot;, 10&quot;, 12&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fittings</td>
<td>ANSI 150 lb. drilling</td>
</tr>
<tr>
<td>Pressure</td>
<td>150 psi (10.3 bar) working pressure</td>
</tr>
</tbody>
</table>
| Temperature      | Operating: 10˚ to 130˚ F (-12˚ to 54˚ C)  
Non-Operating: -40˚ to 158˚ F (-40˚ to 70˚ C) |
| Accuracy         | +/- 1% of reading for flow between 10% to 100% of max flow  
+/- 2% of reading for flow from cutoff to 10% of max flow |
| Materials        | Body (3" Only): Ductile cast iron, powder coated  
Body (4"-12") : Welded steel, epoxy-coated  
Liner (3" Only): Noryl®  
Liner (4"-12") : Santoprene/Polypropylene  
Electronics Housing: Diecast aluminum, powder-coated (non-IP68)  
Electrodes: 316 stainless steel  
O-ring (3" Only): EPDM |
| Display          | Rate: Gallon/Minute, Liter/Minute, Liter/Second, Cubic Feet/Minute, Cubic Meter/ Hour, Million Gallon/Day, Mega Liter/Day  
Total: Gallon, Gallon x 1000, Liter, Liter x 1000, Mega Liter, Cubic Meters, Cubic Meter x 1000, Cubic Feet, Cubic Feet x 1000 |
| Power            | WMX101: 8-32 Vdc at 30 mA max, with auxiliary battery for continuous operation during power failures  
NOTE: Using an unregulated power supply >18 Vdc may damage the meter due to AC line input voltage fluctuation  
WMX104: 2 Lithium 3.6V “D” batteries, replaceable, 1 year life under continuous use. |
| Pulse Output     | WMX101: Current sinking pulse, opto-isolated, 30 Vdc at 10 mA max  
WMX104: Pulse output available only with addition of post-factory output cable  
Pulse Rates: High Frequency: 10 units/pulse; 100 units/pulse; 1000 units/pulse |
| Conductivity     | >20 microSiemens/cm |
| Empty Pipe Detection | Hardware/software, conductivity-based |
| Regulatory       | NSF-61 (4" - 12" only) |
| Environmental    | NEMA 4X Standard (IP68 Option) |

*Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).
**WMX-SERIES**

**Flanged Magmeter**

**DIMENSIONS**

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**WMX104-300 Shown (3")**

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**WMX104-168 Shown (4"-12" IP68 Housing)**

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**WMX101-168/104-168 (IP68 Housing)**

<table>
<thead>
<tr>
<th>IP68 WMX Meter Size</th>
<th>L</th>
<th>H</th>
<th>T</th>
<th>ID</th>
<th>Shipping Weight IP68 Version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>inch</td>
<td>mm</td>
<td>inch</td>
<td>mm</td>
<td>inch</td>
</tr>
<tr>
<td>3&quot;</td>
<td>12.0</td>
<td>305</td>
<td>6.80</td>
<td>173</td>
<td>.68</td>
</tr>
<tr>
<td>4&quot;</td>
<td>10.24</td>
<td>260</td>
<td>8.12</td>
<td>206</td>
<td>.62</td>
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<tr>
<td>6&quot;</td>
<td>12.27</td>
<td>312</td>
<td>9.22</td>
<td>234</td>
<td>.69</td>
</tr>
<tr>
<td>8&quot;</td>
<td>14.24</td>
<td>362</td>
<td>10.22</td>
<td>260</td>
<td>.69</td>
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<tr>
<td>10&quot;</td>
<td>18.18</td>
<td>462</td>
<td>11.22</td>
<td>285</td>
<td>.69</td>
</tr>
<tr>
<td>12&quot;</td>
<td>19.68</td>
<td>500</td>
<td>12.28</td>
<td>312</td>
<td>.81</td>
</tr>
</tbody>
</table>

**Flanges**

- Standard ANSI 150 lb. drilling
- Cable (WMX 101) 1 lb.
**WMX-SERIES**

**Flanged Magmeter**

**OUTPUT CAPABILITIES**

<table>
<thead>
<tr>
<th>Standard WMX Meter Size</th>
<th>L (inch/mm)</th>
<th>H (inch/mm)</th>
<th>T (inch/mm)</th>
<th>ID (inch/mm)</th>
<th>Shipping Weight Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>10.24/260</td>
<td>7.0/178</td>
<td>.62/20.9</td>
<td>3.12/79.25</td>
<td>32/15</td>
</tr>
<tr>
<td>6&quot;</td>
<td>12.27/312</td>
<td>8.1/206</td>
<td>.69/23.3</td>
<td>5.05/128.27</td>
<td>47/21</td>
</tr>
<tr>
<td>8&quot;</td>
<td>14.24/362</td>
<td>9.1/231</td>
<td>.69/23.3</td>
<td>6.44/163.58</td>
<td>69/31</td>
</tr>
<tr>
<td>10&quot;</td>
<td>18.18/462</td>
<td>10.1/257</td>
<td>.69/23.3</td>
<td>8.61/218.69</td>
<td>125/57</td>
</tr>
<tr>
<td>12&quot;</td>
<td>19.68/500</td>
<td>11.1/282</td>
<td>.81/20.6</td>
<td>10.55/267.97</td>
<td>145/66</td>
</tr>
</tbody>
</table>

Flanges: Standard ANSI 150 lb. drilling. Cable (WMX 101) 1 lb.

Data Logger Compatible

Telemetry Ready
STRAIGHT PIPE RECOMMENDATIONS

(X = pipe diameter)

Minimal straight pipe required between elbows.
For other piping configurations, consult factory.

FLOW RANGE (3" - 12")

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>12&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gal/Min</td>
<td>.47</td>
<td>.75</td>
<td>2</td>
<td>3.8</td>
<td>6</td>
<td>8.2</td>
</tr>
<tr>
<td>Liter/Sec</td>
<td>.18</td>
<td>.29</td>
<td>0.76</td>
<td>1.54</td>
<td>2.54</td>
<td>3.78</td>
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<tr>
<td>Minimum</td>
<td>7.5</td>
<td>12</td>
<td>32</td>
<td>60</td>
<td>95</td>
<td>130</td>
</tr>
<tr>
<td>Maximum</td>
<td>700</td>
<td>1,000</td>
<td>2,400</td>
<td>4,400</td>
<td>7,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>
## HOW TO ORDER

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE</th>
<th>OPTIONS</th>
<th>FLOW MEASUREMENT UNITS</th>
</tr>
</thead>
</table>
| WMX101 | 3" = -300* | High Frequency = -HF  
10 Units**/Pulse = -PxX  
100 Units***/Pulse = -PxK  
Factory Installed Pwr/Out Cable  
6m (20 ft) = -11/6  
15m (50 ft) = -11/15  
30m (100 ft) = -11/30  
Factory Installed IP68 Pwr/Out Cable  
6m (20 ft) = -11/6S  
15m (50 ft) = -11/15S  
30m (100 ft) = -11/30S  
Internal Data Logger = -127  
Serial Output = -131  
IP68 Submersible = -168 | Rate  
Gal/Min = GPM  
Liter/Min = LPM  
Litres/Sec = LPS  
Cu Ft/Min = CFM  
Cu Met/Hr = CMH  
Mil Gal/Day = MGD  
Meg Lit/Day = MLD |
| WMX104 | 4" = -400  
6" = -600  
8" = -800  
10" = -1000  
12" = -1200 | Consult factory for additional units  
Any rate selection can be combined with any total selection |

### ACCESSORIES

- Remote 4-20 mA (analog) signal = AO55W
- Remote Rate and Total Indicator (Battery) = FT415W
- Remote Rate and Total Indicator (Powered) = FT4200W
- Remote Data Logger = DL76W
- Dual Power Supply, 115 Vac, 12/24 Vdc = PC42
- Post-Factory 20-ft. Power/Output Cable (WMX101 Standard Housing Only) = DC30
- Post-Factory 50-ft. Power/Output Cable (WMX101 Standard Housing Only) = DC35
- Post-Factory 100-ft. Power/Output Cable (WMX101 Standard Housing Only) = DC100
- Post-Factory 20-ft. Power/Output Cable (WMX104 Standard Housing Only) = DC30S
- Post-Factory 50-ft. Power/Output Cable (WMX104 Standard Housing Only) = DC35S
- Post-Factory 100-ft. Power/Output Cable (WMX104 Standard Housing Only) = DC100S
- Grounding Rings (not needed for most applications):  
  - 3" = 102157  
  - 4" = 100876  
  - 6" = 100877  
  - 8" = 100889  
  - 10" = 103288

### CONTACT YOUR SUPPLIER

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